Occasional Review

Gastrology: the use of culinary terms in medicine

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In the era of the SI unit everything in medicine is supposed to be accurately measured and standardised. Nevertheless, medicine remains essentially a descriptive science, particularly where the communication of appearance is concerned: whether abnormal physical signs, techniques of surgery, radiological shadows, or pathological abnormalities of organs or cells. The frequency with which allusions are made in medical writing to food and drink is impressive. We have culled 99 items of food and distilled 22 beverage-related items from various publications, and present an analysis of this harvest.

Fruit

The more delectable the fruit the more likely it is to be mentioned, although most of the references are to temperate fruits. The strawberry seems to lend itself particularly to descriptive analogy: easily remembered are the strawberry nose (rhinophyma) and naevus (cavernous haemangioma), as well as the strawberry gall bladder (cholesterolosis). In addition, a strawberry tongue is seen, with a coating, in scarlet fever; when this coating disappears—uncovering congested, oedematous papillae resulting in a darker red colour—a raspberry tongue is produced. The cutaneous lesions of secondary (framboesiform) yaws are evidently thought to resemble the raspberry, as does enteroteratoma or raspberry tumour. A single angioma of the retinal vessels may also produce a raspberry appearance.

All kinds of berries are mentioned and they seem to lend themselves to vivid analogy. There is the blackcurrant rash seen with xeroderma pigmentosum. Abnormal teeth due to congenital syphilis are known as mulberry molars. Indeed, the mulberry is surprisingly popular—as morula (Latin), the early stage of the dividing fertilised ovum, as the mulberry bladder calculus composed of calcium oxalate, the mulberry cell (a vacuolated plasma cell), or with the mulberry rash of typhus. A non-specific berry is the description applied to the aneurysmal dilatation of major intracerebral arteries. Staphylococci and Streptococci also resemble berries, their names coming from kokkus, Greek for berry.

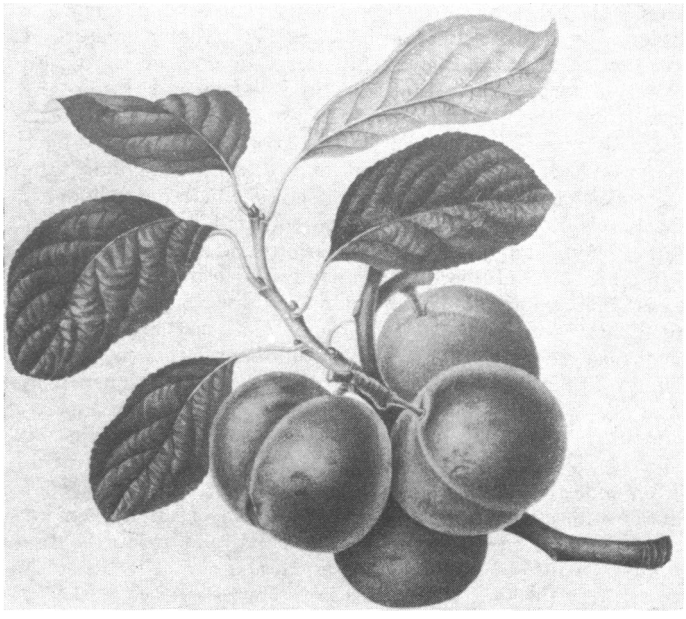
References to grapes are more common than to wine: there are racemose glands, grape endings of axons, and Carswell's grapes—where there are masses of tubercles in primary tuberculosis clustered around the finer bronchioles. The derivation of botryoid rhabdomyosarcoma of children is from the Greek for bunches of grapes.

In the eye, occlusion of the central retinal artery produces a cherry-red spot; a cherry-red spot may also be seen in Tay-Sachs disease. Peau d'orange is seen in the skin with lymphatic permeation by infiltrating carcinoma of the breast. The neuroanatomist is familiar with olives, both superior and inferior. The radiologist will find melon-seed bodies on *x*-ray film of a tuberculous arthritis. Condylomata accuminata are sometimes referred to as fig warts. The popular name of the larynx is a continual reminder of the part the apple played in Adam's downfall. A colonic tumour may produce an apple-core picture on barium enema.

Not all food is unprocessed. The lesions of lupus vulgaris are the colour of apple jelly. Classically, stools passed by a child with intussusception are described as redcurrant jelly. A processed plum lends its name to a congenital disorder where there is a deficiency of the abdominal musculature—prune belly syndrome. A chronic, passively congested liver appears not like the outer surface, but like the cut inner surface of a nutmeg. Another tropical nut is the coconut, and the coconut sound may be elicited from percussion of a cracked water coconut or the skull of a person with Paget's disease.

Vegetables

Vegetable names are used much less frequently than fruits; the strawberry clearly has the advantage in the medical mind over the potato, although chip-bone grafts are well recognised. Dark green, porridgy stools are known as spinach stools. The cauliflower lends its name to many neoplasms, as well as the traumatised ear. The histopathology of systemic lupus erythematosus reveals onion-skin lamination of splenic arterioles and



Gastrology (1810): The science of catering for the stomach (*Shorter Oxford English Dictionary*).

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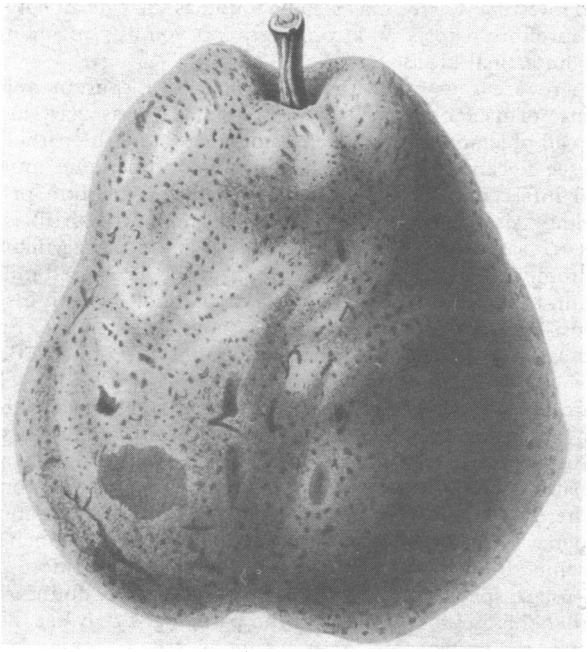


a similar description is given to hypertensive arteriolar changes in the kidney.

The tongue in pellagra resembles a boiled beetroot. Inevitably the food analogies are culture bound, the tomato ketchup spleen secondary to non-specific inflammation is a post-prandial inspiration of a North American. The stools of a typhoid patient are described as pea soup. Presumably the name comes from the green garden pea of Europe rather than the red pea of Africa.

Grain and cereals

An anaplastic variant of bronchogenic carcinoma is characterised by small "oat cells." Sago spleen is characteristic of amyloidosis where the amyloid is deposited in Malpighian corpuscles and central arteries. Miliary tuberculosis derives its name from the millet seed; a corn is a callous usually on the foot. In secondary yaws, if the cutaneous lesions appear as Indian corn they may be called guinea-corn yaws. A rice body may be seen in a hygroma or in a tendon sheath. All that the radiologist may see, to suggest a diagnosis of a duodenal ulcer is a fleck of "barium rice." For the stools of a cholera patient to be known as rice water denotes not only a fertile imagination but also poor cooking technique, as the most nutritious way of boiling rice is to ensure that the water to rice ratio is such that the rice absorbs just enough moisture to be cooked, but not soft. Throwing away excess water from parboiled rice must be a British trait.

A hot cross bun head indicates widespread periostitis of the skull in congenital syphilis. But a bread and butter pericarditis is usually associated with acute rheumatic fever. The cottage loaf appearance on a chest *x*-ray film is due to total anomalous pulmonary venous drainage to the left innominate vein. Sugar loaf shoulder is a deformity produced by dislocation of the acromioclavicular joint. Finally, a tart cell is a histiocyte containing a second, characteristic nucleus filling the concavity of the major nucleus.

Sweets

Medical practitioners are fond of sweets. The most obvious name arising from this delight is diabetes mellitus. Note the use of the term honey and not simply sugar or sweet. The honeycomb lung, as its name vividly suggests, is an example of end-stage fibrotic and cystic disease of the lung. Similarly, honeycomb choroiditis of Doyne is a genetic degenerative disease of the choroid. Maple syrup urine disease is an inborn error of tryptophan metabolism. Chocolate cysts are found in the ovary implicated in endometriosis. Chocolate stools typically occur in amoebic dysentery. A sugar-icing spleen is of anatomical pathological interest only, indicating a non-specific perisplenitis. Bull's eye lesions in the small intestine, indicative of metastases, probably refer to the animal, rather than the sweet.

The spleen of Hodgkin's disease is said to be "hardbake" because it resembles toffee studded with almonds.

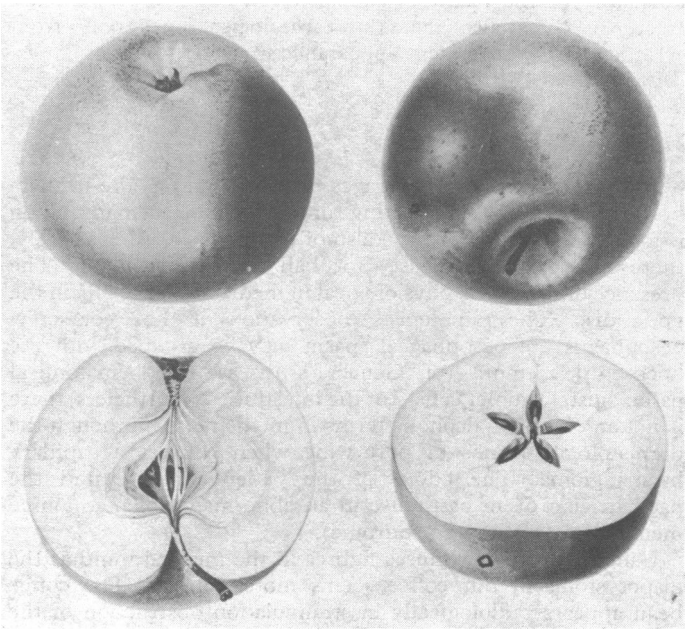
Meat and poultry

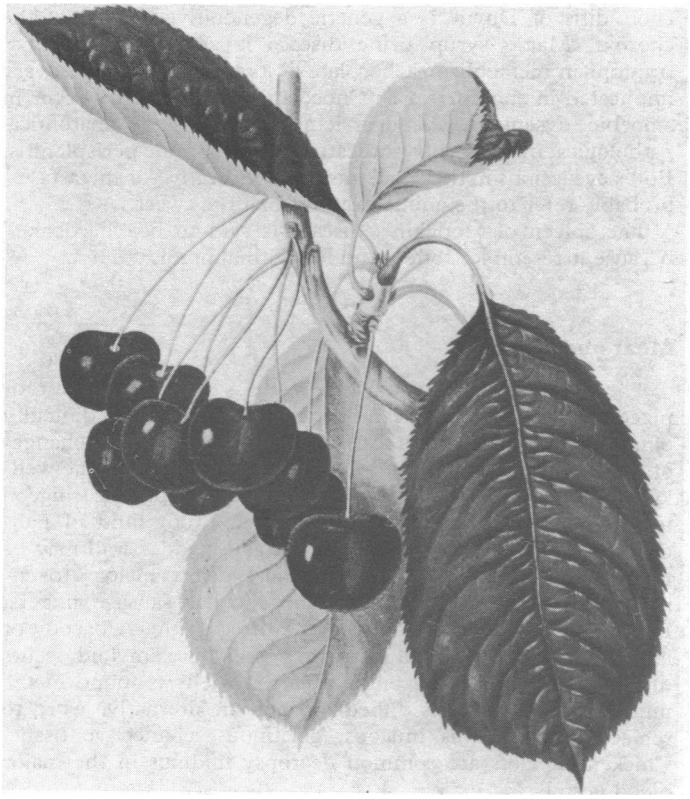
There are few meaty analogies unless a chicken chest or pigeon breast appearance can be included. In arthritis, difficulty of movement may give rise to a waddling goose gait. The changes of the erector pili muscles of the skin may give rise to the well-known gooseflesh. Deformity of the foot may produce pigeon toes. One poultry analogy is to chicken broth fluid of pancreatitis. Egg-shell calcification of the gall bladder wall may be found radiologically. It is rare to find a direct analogy to unprocessed meat, even if an acromegalic has sausage fingers. Pretibial myxoedema is sometimes called pigskin. A bacony or lardaceous spleen is found in amyloidosis where amyloid occurs diffusely throughout the pulp. Wharton's jelly is found in the umbilical cord and it is difficult to find an alternative word to replace jelly for this mucous, gelatinous, connective tissue. Chicken fat clots are common necropsy findings in the major blood vessels.

With meat must go seasoning. Hyperparathyroidism may give rise to the pepperpot skull *x*-ray appearance. Salt and pepper duodenitis is now increasingly commonly found by the gastrointestinal endoscopist, whereas the ophthalmologist sees pepper and salt fundi. The acetabulum of the hip joint derives its name from the Latin meaning vinegar cup.

Fish

The dermatologist recognises dry skin as icthyosis. The split hand or foot deformity is called lobster claw. Crab yaws may be produced by *Treponema pertenue* lesions affecting the feet. More exotically, varicose veins under the tongue are thought to look like sturgeon's eggs—hence caviar lesions of the tongue. The





ophthalmologist may see salmon patches in the fundus occuli in sickle haemoglobinopathies, but may also see a salmon patch of interstitial keratitis. The gastroenterologist in the tropics aspirates anchovy sauce from an amoebic liver abscess. Mitral stenosis may be so severe that the deformed opening resembles a fishmouth. The cut surface of sarcomas is described as "fish flesh" in appearance.

Microbiologists and immunologists show what to do with all this raw material by describing opsonisation or preparation of the victuals for eating. In addition, radiologists demonstrate the tables of the skull and napkin-ring deformities of colonic neoplasms. Neurologists assess clasp-knife rigidity, orthopaedic surgeons see a silver fork deformity in Colles's fracture and general physicians observe spoon nails in iron deficiency anaemia. The food may be eaten from a dish (a congenital deformity of the face) or dishpan (seen as a depressed skull fracture). Note also that the cardiologist dines only from Dresden china, a frequent appearance in aortic stenosis.

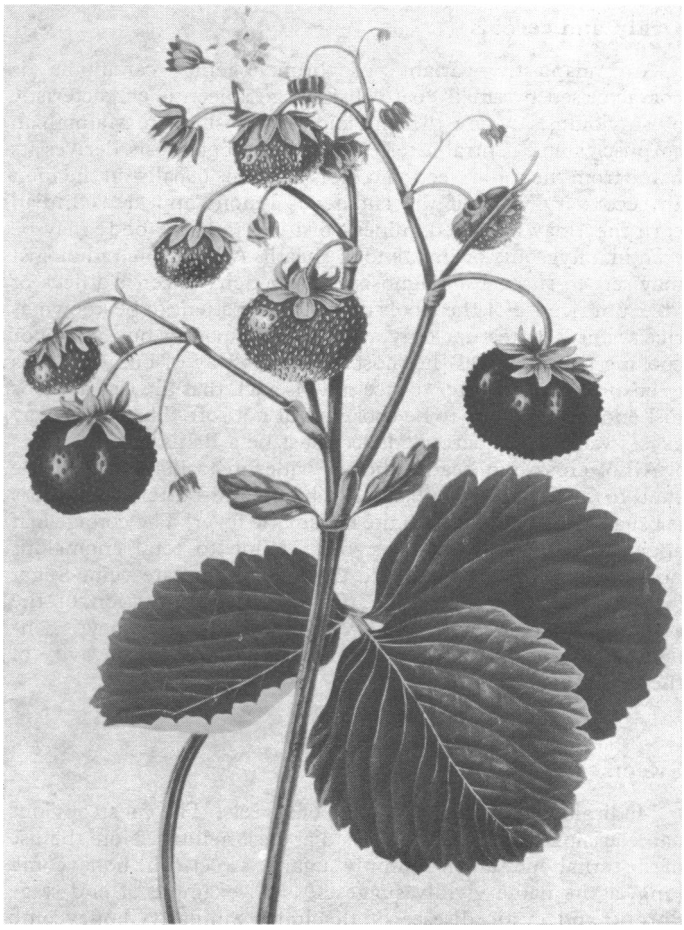
Beverages

Indirect allusions to beverages may be found as the leather-bottle stomach of an infiltrating tumour. A more benign finding is a cup and spill deformity, also of the stomach. Alternatively, there is a cup arthroplasty for ball and socket joints. The presence of the cup is physiological in medicine, especially in the optic disc. The radiologists' observation of the "corkscrew oesophagus" of oesophageal spasm may be grouped with the hock-bottle femora (of Gaucher's disease) and anatomical pathologists' "goblet cells" (of the intestine). Nevertheless, there is not an excess of alcoholic terms in medicine, even though the dermatologist thinks of port wine when he sees a capillary haemangioma. The odour of the patient may remind the paediatrician of an oasthouse in an abnormality of methionine metabolism (oasthouse syndrome).

Caffeine in various guises figures in the medical mind as the teapot stomach, but coffee seems more popular. The coffee bean appears radiologically in strangulation obstruction of the small intestine. Coffee may also be found as the café au lait spots of neurofibromatosis and coffee ground vomitus of an upper gastrointestinal bleed.

There are few other drinks. Prune-juice sputum appears because of haemoptysis of altered blood. The vascular surgeon may call phlegmasia alba dolens "milk leg," and the pathologist will see fleckmilz in a spleen which has undergone multiple small infarcts. Milk spots are also seen in omentum or epicardium. Also, chyluria may be known as milk urine. Milk is not, however, associated with the terminology of pinta nor Milkman's syndrome and will not be considered further. Processed milk, as well, in the form of cheese appears in tuberculosis with caseous necrosis and in endometrial hyperplasia as Swiss cheese. Butter cysts are foci of saponified, necrotic tissue in a lipoma. Butter stools are synonymous with steatorrhoea.

Further analysis of the descriptive terms shows that pathologists have provided 32 of the culinary terms, radiologists 16, gastroenterologists 15, dermatologists 13, general physicians 12, paediatricians 10, surgeons 8, ophthalmologists 8, and anatomists 7. There are three possible explanations for this difference in frequency of use of food terminology in different branches of medicine. Firstly, the spectrum of disease truly differs from high-usage specialty to low-usage specialty. We doubt really whether this is so, for, whereas the pathologist may see all the diseases, the gastroenterologist cannot. A second explanation is that pathologists and gastroenterologists may use their eyes more in the course of their work. Most certainly this is true compared with the auditory skills of the cardiologist, for example, but does not provide the entire explanation. Thirdly, the use of descriptive terms may be a reflection of the inexactitude of the specialties concerned. That we were unable to find any biochemical or chemical pathological analogies and yet lots of radiological and anatomical-pathological ones supports our belief. Finally, perhaps the frequency with which food terms are



used is a reflection of the use of euphemisms in medicine. Who but the gastroenterologist could see a foodstuff in a pathological specimen of stool as in redcurrant jelly or chocolate? This last explanation may be considered the most likely, since, in dealing with unpleasantness, a natural defence mechanism is sublimation —to turn the unpleasant into something much more appealing. In other words, we suggest that some doctors are obsessed with the basic human instinct of eating and drinking and would prefer to reflect on the pleasures of life while following less aesthetic pursuits. Gastroenterologists may really be gastrologists at heart.

It is doubtful whether there will ever be SI units of description to replace food terms in medicine. We recommend, however, that all doctors periodically review their own use of these descriptive terms to ensure that others derive a similar understanding as the user—for example, would doctors nowadays recognise the inside of a nutmeg if they saw one, since nutmeg is presented ground-up, packaged in little bottles in many countries? How many know what an oasthouse is, let alone what is its smell? Who in Britain is familiar with the taste of maple syrup?

As may be expected in English medical publications, the food terms employed show a strong regional and temporal bias. But does *everyone* outside England know what a strawberry is? Yet, if strawberry gall bladder were called equally accurately a lychee gall bladder many people who had never seen a fresh lychee would be totally misled if they imagined that the tinned lychee has the same appearance.

Since the purpose of descriptive terminology is to convey accurately the meaning to other doctors throughout the world, any new attempts to introduce culinary terminology in medicine should be done with caution and the terminology should be kept simple rather than exotic.

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Postmortem medicine—an essential new new subspecialty

BERRILL YUSHOMERSKI YANKELOWITZ

With increasing technical knowledge, medical care has necessarily become more and more subspecialised.[1–10] Both the local community and the government have tried to approach the problem of delivering this care to as broad a segment of the population as possible. Especially notable are the heavily funded programmes in geriatrics research, as all segments of society have come to recognise the increasing proportion of old people in the population. The time has now come for us to focus on the medically most underserved population in the world today—the deceased. The urgency of this is quite apparent. There are more people who have already died than are alive today, and their number is increasing at an alarming rate. Physicians have not focused on the problems of the dead. Aside from anatomy, it is not a subject taught in most medical schools; as a result, early sensitivity of the medical student to the needs of the dead is never formally developed. Postmortem medicine is not a mere extension or subspecialty of geriatric medicine, but a major specific and unique problem in health-care delivery. We have therefore undertaken a pilot project to determine how the medical profession might better serve the dead patient, and this is the subject of the present paper.

The University of East Dakota Medical Center's pilot project on postmortem medicine is a broad-based multidisciplinary undergraduate and postgraduate study programme designed to investigate all aspects of diagnosis and care for the dead patient. Early in their training our medical students are given a one-semester course in psychosocial problems of the deceased human. In addition to didactic sessions, students are taken on field trips to cemeteries and funeral parlours, because we feel that classroom sessions alone depersonalise the dead patient in the student's mind. The members of our psychiatric faculty have responded enthusiastically and like this subject because they get to do most of the talking during patient interviews. Psychoanalysts are especially happy because of the long, meaningful silences they get when treating a dead patient. In the second year of medical school we provide courses in pharmacology and physiology in the dead patient. We have found that the pharmacokinetics of drugs in the formalinised patients are quite different from those in the living. So far we provide only one clinical clerkship in cemetery medicine, but plan to offer a series of electives for interested students in funeral parlour physiology.

At the postgraduate level we have a pilot postmortem ward (separate from the morgue), which is staffed by two fellows who are supported by a National Institutes of Health (NIH) career development grant. The fellows are supervised by a senior attending physician, who is himself dead and therefore has an in-depth understanding of the specialty. The ward promotes active house-staff and nursing education and is a model for future programmes of similar type in the community. House staff who have just been on a ward with live patients have responded enthusiastically to the leisurely pace of the postmortem ward.

Research projects are going on, and we are fortunate to have received extensive Federal and local grant support for such studies as postmortem wound healing, the impact of embalming on social acceptability of the dead, management of the person who died before penicillin was available, and so on.

A series of new subspecialties is already appearing—postmortem endocrinology, postmortem podiatry, and postmortem neurosurgery to name a few. Some of our staff have developed a special interest in the long-dead patient, and we are considering a subsubspecialty of neanderthalogy.

In co-operation with the NIH and Rand Corporation, we have developed an extensive computerised programme of health-care services, delivery evaluation, assessment of the dead patient with peer review panels, and HMO (Heaven's Medical Offices). Our social-professional interface is progressing nicely. We already have a board certifying examination, and memberships are now open for our National College of Postmortem Medicine. The women's auxiliary of the American Dead Society has actively supported our many community efforts.

We have made substantial inroads in a neglected area and it is our hope that other universities will benefit from the billions that our government now wants to spend in this exciting new subspecialty.

References

[1] Parlov, S M, Death as a Subspecialty, *Sem Death*, 1979, **1**, 6.